

The Throughput Year Clock: Defining “one year” for AB 705

December 2020 | www.rpgroup.org

The term “throughput” refers to the percentage of a student cohort who complete a course sequence within a set period after having begun that sequence at the same point in time. Under AB 705 the set period for observing throughput rates is described in law as “one year”. While that time frame seems intuitive enough, the operational definition of “one year” (or the “year clock”) has varied somewhat across sources. For instance, the operational definition of the year clock used by MMAP has evolved over time and been refined. This document provides an overview of how the MMAP team defined the year clock prior to September 2020, as well as a revised definition of the year clock that the team implemented in September 2020. Additionally, it is argued that consistency across cohorts of students with different starting terms within reports is more critical than maintaining a problematic definition simply for future reports to use the same definition as historical reports.

Previously Used Throughput Timeframes

For the purposes of AB 705 research, a year has been defined as two primary terms plus one or two minor terms or three primary terms (for quarter-based colleges). A minor term such as summer or winter intersession may be included in the three primary term sequence because its inclusion is necessary to satisfy the three primary terms requirement. Summer is a minor term for both the quarter and semester systems, whereas winter intersession is only considered a minor term for semester systems. In the quarter system, winter is a primary term. Minor terms offer a reduced selection of courses and fewer enrollment opportunities, and thus are not equivalent to primary terms. Minor terms are denoted in the tables below by square brackets.

The year clock does not assume that students who start in a quarter or semester system will only enroll within the same term system (e.g., they may cross-enroll or change districts). In the examples of term sequences that comprise a year provided in Tables 1 and 2, the “Nominal Terms” description of the year clock sequence shows sequences that are consistent with the starting term’s system but should be interpreted to also include or cover all intervening terms—either semester or quarter—through the final term listed in the “End Term” column.

Given there are only three colleges on the quarter system (Lake Tahoe, De Anza, and Foothill) the issue of students changing from semester to quarter or vice versa is not a large one for overall statewide numbers, although it may have more impact on local calculations for quarter colleges and for semester colleges adjacent to quarter colleges. For example, most fall semester students will not transition to a spring quarter term, but if they do, their progress will be included and tracked in MMAP reports. Importantly, all these timeframes adhere to the parameters of a typical calendar year (i.e., 365 days).

Revising Throughput Timeframes

The set of terms used by the MMAP team to define the year clock initially are shown in Table 1. A close examination of these time frames reveal certain inconsistencies in how a year is defined, depending on the term in which the student enrolls in their first course in the sequence. These initial definitions of the AB 705 year clock were influenced by debate within the AB 705 Advisory Committee, a large committee convened by the Chancellor's Office to provide input into the implementation of AB 705 and guidance to the MMAP research team. Given the timeline for implementation and the compromises among multiple points of view achieved by the committee, the initial research operationalization of the year clock was somewhat uneven. For example, students who started the sequence in a summer semester term would potentially have two minor terms (summer and winter) and two major terms (fall and spring) to complete the sequence while students whose first term in the sequence was in a fall semester were only being tracked for one minor term (winter) and two major terms (fall and spring).

Table 1. Examples of One-Year Throughput Timeframes Used Prior to September 2020

Start Term	Description of "Start Term"	End Term	Description of "End Term"	Nominal Terms
20155	Summer Semester	20164	Spring Quarter	[Summer] – Fall – [Winter] – Spring
20156	Summer Quarter	20164	Spring Quarter	[Summer] – Fall – Winter – Spring
20157	Fall Semester	20164	Spring Quarter	Fall – [Winter] – Spring
20158	Fall Quarter	20154	Spring Quarter	Fall – Winter – Spring
20161	Winter Intersession	20168	Fall Quarter	[Winter] – Spring – [Summer] – Fall
20162	Winter Quarter	20168	Fall Quarter	Winter – Spring – [Summer] – Fall
20163	Spring Semester	20172	Winter Quarter	Spring – [Summer] – Fall – [Winter]
20164	Spring Quarter	20178	Fall Quarter	Spring – Winter – [Summer] – Fall

Note: Start terms as defined by COMIS. Summer was not included in fall starts in the prior model.

To maintain consistency in how the year clock is defined for all possible starting terms and to keep the year clock as close as possible to the standard definition of a calendar year (i.e., 365 day), the MMAP team now tracks all students for **four nominal terms, either three primary and one minor, or two primary and two minor** (see Table 2). This important change assures that throughput rates values are not unduly or arbitrarily affected by the term in which a student begins the sequence. To ensure consistency in the definition of the year clock, changes were

made to the end term of five of the eight possible cohorts. These changes are shown in bold type in the “End Term” column of Tables 2.

While these changes do introduce a small instrumentation effect to comparisons of throughput data from historical reports to current and future reports, the change is expected to result in only minor modifications to actual throughput values (i.e., 0 to +/-2 percentage points). Trend analyses within reports will not be affected by these instrumentation effects. Moreover, the increase in the consistency of measuring throughput rates for all students within a report is more compelling than preserving a flawed year clock calculation simply for the purpose of consistency with historical reports. In other words, it is more important that all students in the same report have a consistent definition than to maintain a consistent definition over time with historical reports.

Table 2. Examples of One-Year Throughput Timeframes Used After September 2020

Start Term	Description of “Start Term”	End Term	Description of “End Term”	Nominal Terms
20155	Summer Semester	20163	Spring Semester	[Summer] – Fall – [Winter] – Spring
20156	Summer Quarter	20164	Spring Quarter	[Summer] – Fall – Winter – Spring
20157	Fall Semester	20165	Summer Semester	Fall – [Winter] – Spring – [Summer]
20158	Fall Quarter	20166	Summer Quarter	Fall – Winter – Spring – [Summer]
20161	Winter Intersession	20168	Fall Quarter	[Winter] – Spring – [Summer] – Fall
20162	Winter Quarter	20168	Fall Quarter	Winter – Spring – [Summer] – Fall
20163	Spring Semester	20171	Winter Intersession	Spring – [Summer] – Fall – [Winter]
20164	Spring Quarter	20172	Winter Quarter	Spring – [Summer] – Fall – Winter

The modifications to the year clock mean that three sequences now include an additional term (i.e., those starting in fall quarter, spring quarter, and fall semester). Additionally, to avoid potentially extending the year clock beyond 365 days in certain cases, students who begin in the summer semester term will now only be tracked through the spring semester term and not through the spring quarter term, as the start dates for summer semester and the end dates for spring quarters overlap for many colleges’ calendars. Similarly, students who begin in the spring semester will only be tracked through winter intersession, not through winter quarter.